

## HIGH THROUGHPUT SCREENING METHOD AND SYSTEM

### ABSTRACT OF THE DISCLOSURE

In an experimental design strategy for evaluating systems with complex physical, chemical and structural requirements, a first population of entities is synthesized, a property of each of the entities can be detected by a high throughput screening (HTS) method and a genetic algorithm based on the property of the entities is executed to identify a second population of entities. A system for screening constructs to determine a problem solution includes a generator to provide a binary string representing a random first population of the constructs, a combinatorial reactor to synthesize the first population of constructs and to determine a fitness function for each construct of the population by a high throughput screening process and an executor to execute a genetic algorithm on the first population to produce a generation that defines a second population of the materials.